

The preoperative clinical characteristics of women with persistent stress urinary incontinence after transurethral injection of Bulkamid

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AIMS OF STUDY

Polyacrylamide hydrogel (PAHG, Bulkamid®) is one of several injectable agents currently used for the treatment of women with urinary stress incontinence (SUI).
 The **aim of this study** was to evaluate the preoperative characteristics and any predictive factors of women with SUI and mixed urinary incontinence with predominant stress form, underwent to transurethral injection of Bulkamid and persistent incontinence after the procedure

MATERIALS AND METHODS

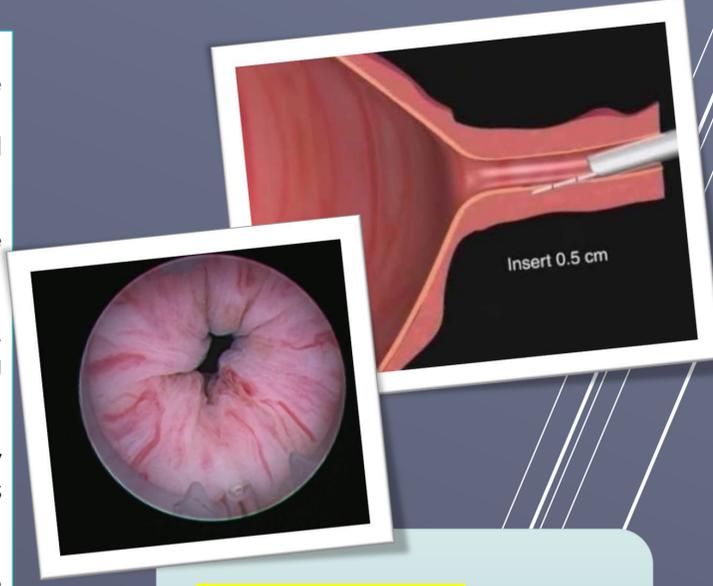
This was a single-center prospective study. The local ethics committee approved the study and all patients signed an informed consent document.
 We **included** women who underwent transurethral injection of Bulkamid for SUI and mixed urinary incontinence with predominant stress form.

We **excluded** women with pelvic organ prolapse or with a history of anti incontinence surgery.

The **preoperative evaluation** included a medical history, a clinical examination, urodynamic study and a dynamic translabial ultrasound. SUI was defined according to ICS standards and classified according to the Ingelman-Sundberg scale.

Follow-up visit included a medical history, physical examination, and uroflowmetry with PVR measurement. A dynamic translabial ultrasound was performed 6 months post-surgery and again at the last visit.

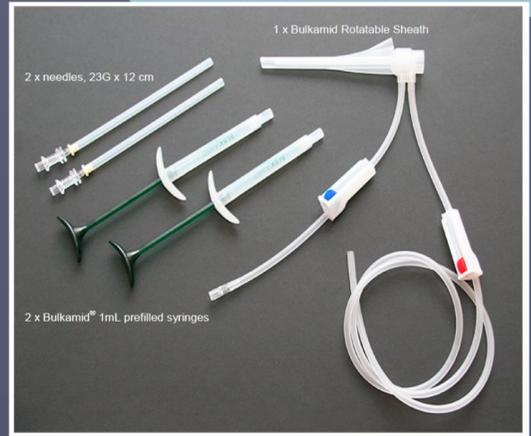
To determine the statistical significance of categorical data comparisons, we performed the Chi-squared test with a continuity correction for each 2 × 2 contingency table. Fisher's exact test was used when expected frequencies were insufficient for a Chi-squared test. We considered p < 0.05 to be statistically significant.



The objective cure for SUI was defined as the absence of urine leakage during the stress test

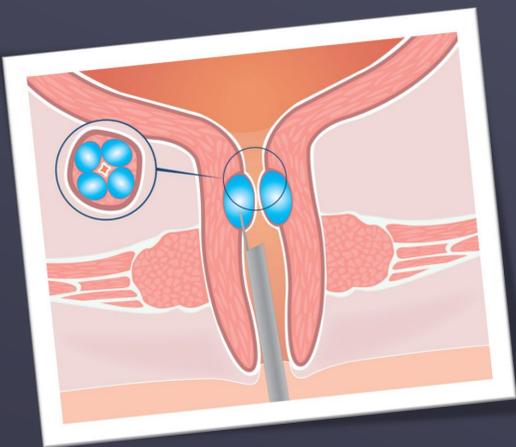
RESULTS

From June 2020 to June 2021, a total of 30 consecutive patients underwent transurethral injection of Bulkamid for SUI and mixed urinary incontinence with predominant stress form were included. Age mean 56.2±2.3 years.



Incontinent women within 6 months have most of their bladder neck open (80%) on preoperative translabial ultrasound compared to patients who have healed; however, the difference is not statistically significant (p=0.05). They had severe preoperative incontinence (grade III) and mostly (70%) mixed urinary incontinence.

Table 1 The baseline characteristics of the population by dividing them into incontinent and continent patients at last visit



	Urethra length (cm±SD)			Bladder neck open (N,%)			Grade I (N,%)			Grade II (N,%)			Grade III (N,%)		
	SUI	No SUI	P value	SUI	No SUI	P value	SUI	No SUI	P value	SUI	No SUI	P value	SUI	No SUI	P value
N (%)	26±1.3	4.2±0.9	0.02	8 (30)	8 (40)	0.5	0 (20)	4 (20)	0.2	0 (50)	10 (50)	0.011	10 (100)	6 (30)	0.0001

The failure of the bulking agent is a multifactorial phenomenon. The closure of the open bladder neck with the bulking agent could be one of the factors that guarantees post-operative continence. The reason why women with open bladder neck are more prone to treatment failure is not clear. Our technique involves making 4 wheals at the level of the bladder neck. An open neck is probably related to a more severe degree of incontinence. In fact, most of the patients, in this study, have stress incontinence grade III. However, Kirchin showed that there are no significant advantages in terms of patient satisfaction after mid-urethral injection in comparison to bladder neck injection but with no demonstrable difference in continence levels. Also, a short urethra could compromise the success of the procedure by creating technical problems. It may be difficult to perform wheals in a short urethra. Mixed incontinence may not benefit from bulking agent treatment due to the different pathophysiological mechanism.

CONCLUDING MESSAGE

A short urethra and the presence of severe stress incontinence can compromise the results of the transurethral injection of Bulkamid. Patient selection is the key element to the success of this procedure